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| 09/890,086 | 11/26/2001 | Gerhard Schnabel | 514413-3884 | 6212 |
| 20999 | 7590 | 01/23/2004 | EXAMINER | |
| FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151 | | | CLARDY, S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1616 | |

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,086

Applicant(s)

SCHNABEL ET AL.

Examiner

S. Mark Clardy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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New claims 19-70 are now pending in this application which has been filed under 35 USC 371 as a national stage application of PCT/EP00/00469, filed January 22, 2000.

This application lacks unity of invention under 37 CFR 1.475 (MPEP 1850, 1893.03(d)). In response to the requirement for restriction and election of species, applicants have elected the invention of Group I, drawn to sulfonylurea compounds (claims 54-68; see formula Ia), compositions comprising them (claims 19-53, 69), and a method of making the compositions. No method of using the compounds/compositions has been claimed. Applicants further elected, with traverse, the species within Group I comprising the sulfonylurea herbicide iodosulfuron-methyl SMe_3 (page 28, Table 4, compound 1).

Again, upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP 809.02(a).

Comparative data has been presented in Table 1 at the end of the specification (note that there is another Table 1 on page 25), but it cannot be determined whether the elected compound is any of the tested herbicides (identified as compounds 4.2, 3.6, or 4.14; presumably referring to Tables 3 and 4, pages 26 and 28). The comparative data in the declaration shows that the elected species of iodosulfuron forms an emulsifiable concentrate (EC), whereas iodosulfuron itself, or the sodium salt thereof, does not.

The objection to claims as being in improper form is withdrawn in response to applicants' submission of new claims.

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Applicant is advised that should claim 19 be found allowable, claim 53 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Specifying in the preamble that the composition of the parent claim is "an herbicidal or plant-growth-regulating composition" when the parent claim is drawn to a well known class of herbicidal compounds (i.e., sulfonylureas) in no way further limits the parent claim. Thus, claim 53 is a duplicate of claim 19.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 70 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The term "using" does not constitute a method step. At least one positive recitation of a method step is required in a method claim.

Claims 21-44 and 54-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 42 and 43 are improperly multiply dependent on both claims 19 and 21. Claim 44 is dependent upon itself. Claims 21-44 and 54-69 are rejected because claim 21 (from which the remainder depend) is unclear in its recitation of several substituent groups which are not part of the structure of compound Ia. The only substituents for which a definition is meaningful in claim 21 are $M^{(+)}$, R^a , R^1 , and R^b ; the remainder appear to be

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substituents which would attach to either R^a or R^b, but there is no provision in the structure for the position of these various R, X, Y, and Z groups.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 19, 20, 42-45, 51, 53, and 54 are rejected under 35 U.S.C. 102(a), (b), and (e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mayer et al (US 6,413,911).

Mayer et al teach the combination of sulfonylurea herbicide salts, preferably trialkylsulfonium salts, in herbicidal compositions which may further comprise conventional agrochemical formulation additives such as wetting agents, dispersants, or emulsifiers (columns 8-9). This rejection is necessary since the search was widened beyond the elected species (trimethylsulfonium salt of iodosulfuron) which has been determined to be allowable (see below).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-70 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Hacker et al (PCT WO 96/41537) in view of Gesing et al (US 6,451,737) and Mayer et al (US 6,413,911).

Hacker et al teach that, among other known sulfonylurea herbicides, iodosulfuron-methyl was a known herbicidal agent (abstract, $R^1 = C_1$ alkyl; page 5, lines 22-33), and that agriculturally acceptable salts (e.g., Na, K, ammonium) were known to be herbicidally useful as well (page 6, lines 1-7). Trimethyl (or trialkyl) sulfonium salts are not disclosed.

Gesing et al and Mayer et al teach that, in addition to sodium, potassium, ammonium, and other conventional salts, the trimethylsulfonium salts of sulfonylurea herbicides were known in the art (Gesing et al, claim 1', Mayer et al, col 8, lines 16-41). (The sulfonylurea compounds of Gesing differ from iodosulfuron in the substituents on the phenyl ring, while the sulfonylurea herbicides of Mayer et al differ in the 4,6-substituents on the triazine ring, and have non-fluorine halogen substituents on the phenyl ring.) Mayer et al also teaches the methods of making salts of sulfonylurea herbicides, and also teaches that the trialkylsulfonium salts are preferable (col 8, lines 39-40).

One of ordinary skill in the art would be motivated to combine these references because they teach that salts of sulfonylurea herbicides retain herbicidal utility, and that variations in these peripheral substituents result in improved herbicidal activity and crop safety (Gesing et al, column 1).

Thus it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have made the trimethylsulfonium salt of sulfonylurea herbicides

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because this herbicide was known in the art and because the trimethylsulfonium salts, like the more common examples of sodium, potassium, and ammonium salts, were known in the art. Further, Mayer et al teaches that the trialkylsulfonium salts are preferable.

Applicants' data demonstrates unexpected results in comparing the trimethylsulfonium salt of iodosulfuron with iodosulfuron itself, and its sodium salt, for forming EC formulations; thus claims drawn to this species will be allowable. Because the claims are indefinite, however, it cannot be determined which, if any, of the claims actually read specifically, and only, on the elected species.

No other unobvious or unexpected results are noted; no claim is allowed.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

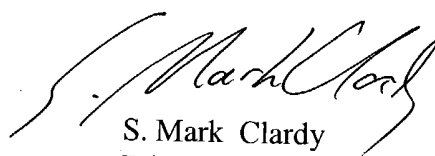
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 703-308-4550. The examiner can normally be reached on 7:20 - 3:50.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 308-2927. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

AU1616 is moving on February 3, 2004, after which, the examiner may be reached at 571-272-0611, the SPE at ...-0602.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.



S. Mark Clardy
Primary Examiner
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January 21, 2004